



U.S. Department
of Transportation

Research and
Special Programs
Administration

MAR 20 1998

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 9740
(FIRST REVISION)

EXPIRATION DATE: February 29, 2000

(FOR RENEWAL, SEE 49 CFR SECTION 107.109)

1. GRANTEE: National Aeronautics and Space Administration (NASA), Washington, DC
2. PURPOSE AND LIMITATION: This exemption authorizes NASA to hydrostatically retest DOT (ICC) 3AA and 3AAX cylinders and certain non-DOT specification cylinders which are in partial conformance with DOT (ICC) 3AA and 3AAX specifications. This exemption provides no relief from any regulation other than as specifically stated herein.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR 173.34(e), the introductory paragraph and the Table, 718.37.
5. BASIS: This exemption is based on the application of NASA dated September 22, 1997, submitted in accordance with 49 CFR 107.109 and a supplemental letter dated March 13, 1998.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Helium, compressed	2.2	UN1046	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Oxygen, compressed	2.2	UN1072	N/A
Compressed gases, n.o.s.	2.2	UN1956	N/A

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Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed (Air must be manufactured by vaporization of 80:20 ratio liquid nitrogen to liquid oxygen)	2.2	UN1002	N/A

7. PACKAGING AND SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a DOT (ICC)AA or 3AAX cylinder mounted on a tube trailer vehicle chassis or non-DOT specification cylinders that conform with DOT (ICC) 3AA or 3AAX specification except that the cylinders: are manufactured from AISI 4340 steel; exceed the maximum wall stress specified in §178.37-(f) while not exceeding 67 percent of the minimum tensile strength of the steel; and the threaded connections do not conform to the provisions specified in §178.37-(h) (3). Each cylinder must be retested and accepted in accordance with the test procedure specified in the application and as prescribed in this exemption, in place of that prescribed in 49 CFR 173.34(e).

b. TESTING -

1. Each cylinder must be hydrostatically tested and refurbished in accordance with Kennedy Space Center (KSC) Specification KSC-SO-S-9 entitled "Specification for the Remanufacture and Retesting of Compressed Gas Trailers" after 10 years or 400 cycles, whichever occurs first.

2. The initial qualifying test and each subsequent retest must include the following steps as a minimum:

- a. Retest and refurbishment of compressed gas trailers in accordance with KSC Specification KSC-SO-S-9;
- b. Leak test;
- c. Dew point certification of residual leak test gas (dew point must be -65°F or lower);
- d. Document test; and
- e. Document chassis and trailer suitability.

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3. Cylinders that are used or that have been used for the transportation of hydrogen or hydrogen bearing gases are not authorized for the extended retest allowed under this exemption.

4. Cylinders retested in accordance with paragraph 7 above may be charged to 110 percent of marked service pressure in accordance with 49 CFR 173.302(c).

c. OPERATIONAL CONTROLS -

1. Preventative maintenance should be carried out on the trailer and cylinders in accordance with the "Compressed Gas Trailer and Movable Storage Unit Service Life Maintenance Plan (EGG-4430588)" included in the petitioners application.

2. The gas pressure in each cylinder may not drop below 200 psig at any time.

3. At the time of each filling, the gas must be sampled to determine that the dew point of the gas is - 65°F or lower.

8. SPECIAL PROVISIONS:

a. Persons who receive the packages covered by this exemption may reoffer them for transportation provided no modifications or changes are made to the packages, all terms of this exemption are complied with and a current copy of this exemption is maintained at each facility from which such reoffering occurs.

b. MARKING -

1. The exterior of the trailer cabinet of the vehicle chassis to which the cylinders are affixed must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9740".

2. An exterior tube on each side of a tube module must be marked with letters at least 2 inches high on a contrasting background "DOT-E 9740".

3. The current retest date must be marked on the rear bulkhead inside the trailer cabinet at approximately eye level above the withdrawal valve for tube trailers and on the bulkhead near the withdrawal valve for tube

modules. In the event retest dates of cylinders differ in a trailer cluster, the retest date displayed will be that of the oldest retest date, meaning the date of the retest that must occur first.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS:

A copy of this exemption must be carried aboard each motor vehicle.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. Section 5101 et seq:

- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Registration required by 49 CFR 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in 49 CFR 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by 49 CFR 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS:

a. The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

b. The following information must be reported to Office of Hazardous Materials Exemption and Approvals:

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1. A report on the first test and a report on each subsequent retest indicating the number of cylinders tested under this exemption and identification by serial number of those passing and those failing to pass the test authorized by this exemption.

2. The following information must be recorded each time a cylinder is filled and be made available to a representative of the DOT upon request:

- (a) DOT specification number.
- (b) Maximum allowable filling pressure.
- (c) The gas transported.
- (d) Filling pressure.
- (e) Source of gas.
- (f) Date of filling.

Issued at Washington, D.C.:

Ann Mazza

for Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

3/20/98
(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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